

ABSTRACT

A method for assembling a whole semiconductor wafer (101) with a plurality of device units (120) having metal contact pads. Each contact pad has a patterned barrier metal layer and a metal stud (103, preferably copper or nickel) with an outer surface suitable to form metallurgical bonds without melting. A leadframe suitable for the whole wafer is provided, which has a plurality of segments groups (102), each group suitable for one device unit; each segment has first (102a) and second ends (102b) covered by solderable metal. A predetermined amount of solder paste (104) is placed on each of the first segment ends. The leadframe is then aligned with the wafer so that each of the paste-covered segment ends is aligned with the corresponding metal stud of the respective device unit. The leadframe is connected to the wafer and the whole wafer is encapsulated (105) so that the device units and the first segment ends are covered, while the second segment ends remain exposed. The encapsulated wafer is separated (110) into individual device units (120).